

ABSTRACT

A methodology is provided for fault detection and service restoration in a multiservice switch on a per flow basis. An ingress source transmits the same data over each of two redundant cores. An egress receiver selects on a per flow basis which core to
5 utilize. Bi-directional flows are not necessarily grouped together. The basic approach to fault detection is to assume that the two cores are not in lock step, but that the shelves are continually monitoring link flows for control path data as well as user data. The path monitoring is accomplished using a combination of arbiter and aggregator functions found in the service shelves and core interface cards, respectively. The arbiter transmits
10 link test cells to both cores on a per flow basis, wherein the link test cells traverse and are monitored by respective aggregators to and from each core. When an egress arbiter determines that a flow is bad, it initiates a switch to the alternative source core, from which the flow would continue.